

Amendments to the Claims:

1-27. (Canceled).

28. (currently amended) An isolated nucleic acid encoding a polypeptide having at least 80% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334~~shown in Figure 194 (SEQ ID NO:334);~~

(b) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334~~shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

(d) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(e) ~~the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);~~

[[f]] (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333~~shown in Figure 193 (SEQ ID NO:333); or~~

[[g]] (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the encoded polypeptide induces chondrocyte proliferation.

29. (currently amended) The isolated nucleic acid of Claim 28 encoding a polypeptide having at least 85% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334~~shown in Figure 194 (SEQ ID NO:334);~~

(b) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334~~shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

~~(d) — a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

~~(e) — the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);~~

[[[(f)]] (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333 shown in Figure 193 (SEQ ID NO:333); or

[[[(g)]] (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,
wherein the encoded polypeptide induces chondrocyte proliferation.

30. (currently amended) The isolated nucleic acid of Claim 28 encoding a polypeptide having at least 90% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334);

(b) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;

~~(c) — a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

~~(d) — a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

~~(e) — the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);~~

[[[(f)]] (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333 shown in Figure 193 (SEQ ID NO:333); or

[[[(g)]] (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,
wherein the encoded polypeptide induces chondrocyte proliferation.

31. (currently amended) The isolated nucleic acid of Claim 28 encoding a polypeptide having at least 95% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334);~~

(b) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

(d) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(e) ~~the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);~~

[[f]] (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333 shown in Figure 193 (SEQ ID NO:333); or

[[g]] (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the encoded polypeptide induces chondrocyte proliferation.

32. (currently amended) The isolated nucleic acid of Claim 28 encoding a polypeptide having at least 99% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334);~~

(b) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

(d) ~~a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

~~(e) — the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);~~

[[[(f)]] (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333 shown in Figure 193 (SEQ ID NO:333); or

[[[(g)]] (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,
wherein the encoded polypeptide induces chondrocyte proliferation.

33. (currently amended) An isolated nucleic acid comprising:

(a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334);

(b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;

~~(e) — a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334);~~

~~(d) — a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 194 (SEQ ID NO:334), lacking its associated signal peptide;~~

[[[(e)]] (c) the nucleic acid sequence shown in Figure 193 (SEQ ID NO:333);

[[[(f)]] (d) the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333 shown in Figure 193 (SEQ ID NO:333); or

[[[(g)]] (e) the full-length coding sequence of the cDNA deposited under ATCC accession number 203270.

34. (currently amended) The isolated nucleic acid of Claim 33 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:334 shown in Figure 194 (SEQ ID NO:334).

35. (currently amended) The isolated nucleic acid of Claim 33 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:334~~shown in Figure 194 (SEQ ID NO:334)~~, lacking its associated signal peptide.

36. (canceled)

37. (canceled)

38. (currently amended) The isolated nucleic acid of Claim 33 comprising the nucleic acid sequence of SEQ ID NO:333~~shown in Figure 193 (SEQ ID NO:333)~~.

39. (currently amended) The isolated nucleic acid of Claim 33 comprising the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333~~shown in Figure 193 (SEQ ID NO:333)~~.

40. (previously presented) The isolated nucleic acid of Claim 33 comprising the full-length coding sequence of the cDNA deposited under ATCC accession number 203270.

41. (canceled)

42. (canceled)

43. (canceled)

44. (currently amended) A vector comprising the nucleic acid of Claim 28, 48, 53 or 58.

45. (previously presented) The vector of Claim 44, wherein said nucleic acid is operably linked to control sequences recognized by a host cell transformed with the vector.

46. (previously presented) A host cell comprising the vector of Claim 44.

47. (previously presented) The host cell of Claim 46, wherein said cell is a CHO cell, an *E. coli* or a yeast cell.

48. (new) An isolated nucleic acid encoding a polypeptide having at least 80% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the encoded polypeptide induces chondrocyte re-differentiation.

49. (new) The isolated nucleic acid of Claim 48 encoding a polypeptide having at least 85% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the encoded polypeptide induces chondrocyte re-differentiation.

50. (new) The isolated nucleic acid of Claim 48 encoding a polypeptide having at least 90% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the encoded polypeptide induces chondrocyte re-differentiation.

51. (new) The isolated nucleic acid of Claim 48 encoding a polypeptide having at least 95% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the encoded polypeptide induces chondrocyte re-differentiation.

52. (new) The isolated nucleic acid of Claim 48 encoding a polypeptide having at least 99% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the encoded polypeptide induces chondrocyte re-differentiation.

53. (new) An isolated nucleic acid encoding a polypeptide having at least 80% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells.

54. (new) The isolated nucleic acid of Claim 53 encoding a polypeptide having at least 85% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells.

55. (new) The isolated nucleic acid of Claim 53 encoding a polypeptide having at least 90% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells.

56. (new) The isolated nucleic acid of Claim 53 encoding a polypeptide having at least 95% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells.

57. (new) The isolated nucleic acid of Claim 53 encoding a polypeptide having at least 99% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells.

58. (new) An isolated nucleic acid encoding a polypeptide having at least 80% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide induces differentiation of pancreatic β -cell precursor cells.

59. (new) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 85% sequence identity to:

(a) the amino acid sequence of the polypeptide of SEQ ID NO:334;

(b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;

(c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270,

wherein the polypeptide induces differentiation of pancreatic β -cell precursor cells.

60. (new) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 90% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the polypeptide induces differentiation of pancreatic β -cell precursor cells.

61. (new) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 95% sequence identity to:

- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or
- (d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the polypeptide induces differentiation of pancreatic β -cell precursor cells.

62. (new) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 99% sequence identity to:


- (a) the amino acid sequence of the polypeptide of SEQ ID NO:334;
- (b) the amino acid sequence of the polypeptide of SEQ ID NO:334, lacking its associated signal peptide;
- (c) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:333; or

(d) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 203270, wherein the polypeptide induces differentiation of pancreatic β -cell precursor cells.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 08-1641 (referencing Attorney's Docket No. 39780-2830 PIC62).

Respectfully submitted,

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